

APPENDIX C: GLOSSARY OF TERMS

100-year floodplain – The areas along or adjacent to a stream or body of water that are capable of storing or conveying floodwaters during a 100-year frequency storm event.

A-Weighted Sound Level (A-Weighted Scale) – Decibel measurements in the “A” scale; a method of representing the human ear’s interpretations of the loudness of an equal sound level throughout the audible frequency range.

Adopted Regional System (ARS) - WMATA’s approved transit system.

Active park – A park where the primary focus is active recreation such as organized sports or other non-noise sensitive uses, such as playgrounds and recreation centers.

Alight – to depart a transit vehicle.

Ambient background noise – The existing cumulative noise that is characteristic of an area based on current activity levels.

Americans with Disabilities Act of 1990 (ADA) – Federal legislation that proscribes standards to meet the needs of individuals with disabilities in public accommodations, employment, transportation, state and local government services, and telecommunications.

Area of Potential Effects (APE) – For purposes of complying with Section 106 of the National Historic Preservation Act, a geographic area or areas where an undertaking (e.g., the Dulles Corridor Rapid Transit Project) may directly or indirectly cause alterations in the character or use of historic properties, if any such properties are located in the area of the project.

Arterial – A roadway designed to connect two distant areas at higher speeds and higher capacity travel than a local road.

At-grade – Level with the ground surface.

Backwater – A section of a stream where water accumulates behind a blockage.

Baseline Alternative – See No Build Alternative.

Benthic macro-invertebrate – An aquatic animal lacking a backbone that inhabits the bottom of an aquatic environment.

Bent – A structure with an upside-down U-shape used to support an aerial transit guideway or an aerial roadway when ground conditions preclude the use of regular supports, such as when there is a roadway below.

Best available control technologies (BACT) – Mitigation measures utilizing the best available equipment to minimize noise and vibration impacts at nearby receptors, typically used during construction activities.

Best management practices (BMPs) – Specific standards utilized during construction to minimize the impact on surrounding resources.

Business Professional and Occupancy License revenues (BPOL revenues) - Revenues that typically form part of a county's General Fund.

Build Alternative(s) – The alternative(s) being evaluated as the proposed action during the EIS process.

Building attenuation – The reduction in the energy of a sound field (i.e. noise) resulting from its passage through a building's structural elements.

Bus Rapid Transit (BRT) – An emerging technology in which buses are used to provide high-quality transit service akin to a rapid rail system.

BRT maintenance and storage facility – Facility with multiple buildings for the maintenance and storage of out-of-service BRT vehicles. Also includes exterior parking spaces for storing buses and surface parking for employees as well.

Central business district (CBD) – The main concentration of office and commercial development in a city. Typically corresponds to the main financial district. Also called the “core” or “downtown.”

Champion tree - The largest tree of its species that occurs within a given jurisdiction.

Channel morphology – The dimension, pattern, and profile of the stream channel.

Channel substrate – Particles on the streambed, both organic and inorganic.

Clean Air Act of 1970 – Legislation mandating the U.S. EPA to set national air quality standards to protect the public against common pollutants. State governments are required to devise clean-up plans to meet these U.S. EPA standards.

Congestion Mitigation and Air Quality (CMAQ) – authorized under the Intermodal Surface Transportation Equity Act (ISTEA), this law provided \$6.0 billion in funding for surface transportation and other related projects that contribute to improvements in air-quality and reduce congestion.

Commonwealth Transportation Board (CTB) – A seventeen-member board appointed by the Governor of Virginia that is primarily responsible for locating routes, approving construction contracts, creating traffic regulations, naming highways, and administering and allocating transportation funds in Virginia.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Commonly known as Superfund, this law was passed in 1980 to create a tax on the chemical and petroleum industries and provide broad federal authority to respond directly to releases or hazardous substances that may endanger public health or the environment.

Comprehensive Plan – Each jurisdiction in the Commonwealth of Virginia is required by state law to institute a comprehensive plan to be used as a guide to decision-making about the natural and built environment.

Conformity – A designation given to transportation plans, programs, and projects that conform to federally mandated state air-quality plans.

Constrained Long-Range Plan (CLRP) – A long-term plan for transportation projects in the Washington metropolitan region with a 25-year horizon from 2001 to 2025. It is constrained to include only those projects that can be funded by revenues that are “reasonably expected to be available” as required by federal law and regulations. It includes both transit and highway projects, and meets federal planning and air-quality conformity requirements.

Council on Environmental Quality (CEQ) - Established in the Executive Office as part of the National Environmental Policy Act of 1969 (NEPA), the council coordinates federal environmental efforts, policies, and initiatives, and ensures that federal agencies meet NEPA requirements.

Cut-through traffic impacts – Impacts caused by traffic using residential streets rather than the local street system intended for through traffic.

Decibel (dBA) – A unit of measure of sound pressure used to describe the loudness of sound on the A-weighted scale (see A-Weighted Sound Level) .

Decision-makers – The Virginia Commonwealth Transportation Board and the Board of Directors of the Washington Metropolitan Area Transit Authority, which, in similar actions, selected and revised the Locally Preferred Alternative.

Diabase – A hard dark-colored igneous rock, found primarily in northern Virginia counties. The bedrock supports a distinctive community type of drought-tolerant plants.

Easement – A right afforded by a property owner for another to make limited use of his or her property.

Environmental Impact Statement (EIS) – A comprehensive study of potential environmental impacts related to federally assisted projects. Projects for which an EIS is required are defined in the National Environmental Policy Act of 1969, as amended.

Federal Transit Administration (FTA) – The agency of the U.S. Department of Transportation responsible for regulation and funding of public transportation.

Fixed-guideway – A track or other riding surface that supports and physically guides transit vehicles designed to travel exclusively on that surface.

Flex – Flexible, able to be used for many purposes. For example, “flex industrial building” may be used to house several uses such as light industrial, office space, audio stores, etc.

Floor-area-ratio (FAR) – The ratio of a building’s floor area to the area of the parcel the building is located on used as a measure of the density of building on a parcel and is used to regulate development.

Flyover bridge – A highway ramp that passes above and across traffic lanes.

Federal Reimbursement Anticipation Note (FRAN) - the Virginia Transportation Act of 2000 created the Priority Transportation Fund and authorized the Commonwealth Transportation Board (CTB) to issue Federal Reimbursement Anticipation Notes (FRANs) in the maximum aggregate principal amount of \$1.2

billion outstanding at any one time. FRANs are a revolving line of credit used by the Commonwealth to fund construction of transportation improvements.

Full Funding Grant Agreement (FFGA) - funding mechanism established by Congress to support the multi-year capital needs of transit project construction. These funding commitments are made after costs, benefits, and impacts are most accurately known and project sponsors have demonstrated the technical and financial capacity to build and operate the project. By law, the FTA negotiates the details of FFGAs with project sponsors, including an annual schedule of when funds will be provided. Once FFGAs are executed, Congress appropriates funding for the project on an annual basis.

General Plan – The term used for a county’s comprehensive plan. See Comprehensive Plan for additional information.

Geographic Information Systems (GIS) – A system of computer software and hardware, data, and personnel to manipulate, analyze and present geographically referenced information or data that is identified according to their locations.

General Obligation Bond (GO Bonds) – A type of Municipal Bond for which principal and interest are secured by the full faith and credit of the issuer and usually supported by either the issuer’s unlimited or limited taxing power.

Grade-separated – Used to describe an alignment that is elevated or below ground, or crossings that use an overpass or an underpass. Grade separation allows traffic or transit vehicles to pass through intersections without stopping for opposing traffic. Heavy rail transit such as the Metrorail system must be grade-separated because it uses a high-voltage third rail.

Ground-borne vibration and noise– The vibration-induced levels that propagate over ground between the source and a receptor such as a building; typically assessed indoors.

Groundwater recharge – A process of replenishment (recharge) of water to an aquifer (a rock formation that has properties favorable for storage of water).

Headway – The time interval between vehicles moving in the same direction on a particular route; also called service frequency.

High-Occupancy Vehicle (HOV) – A vehicle occupied by more than one person; used to distinguish between vehicles that only have a single-occupant (the driver) and vehicles that include passengers as well.

Hertz (Hz) – Frequency measured in cycles per second

Inches per second (ips) – Vibration velocity levels are typically expressed in terms of inches per second.

Indefinite association – Used to describe the relationship between an archeological artifact and the location in which it is found when the location may not be the same location where the artifact was last used.

Infill development – Development of vacant or under-used parcels within existing urban areas that are already largely developed.

Jurisdictional determination (JD) – Regulatory review of previously identified wetlands and waters of the U.S. by the Army Corps of Engineers in compliance with Section 404 of the Clean Water Act.

Keynote Employment Centers – A designation in the Loudoun County General Plan for office or research-and-development centers supported by ancillary services for employees.

Kiss & Ride – Drop off/pick up areas at transit stations in the Metro system.

L10 noise level – The level of noise at which the A-weighted sound pressure level in decibels is exceeded 10 percent of the time.

L90 noise level – The level of noise at which the A-weighted sound pressure level in decibels is exceeded 90 percent of the time.

Layover facility – Facility used for short-term storage of revenue vehicles between scheduled trips.

Ldn – The day-night noise level, represents the average noise level evaluated over a 24-hour period. A 10-decibel penalty is added to events that occur during the nighttime hours (10:00 P.M. to 7:00 A.M.) to account for people's increased sensitivity to noise while they are sleeping.

Lmax – The maximum noise level that occurs during an event or train passby and is the noise level actually heard during the event or passby.

Leq noise level – The level of constant noise which contains the same amount of acoustic energy as time-varying noise levels (e.g. traffic noise) during a given time interval.

Land use – Classification providing information on land cover and the types of human activity occurring on a parcel of land, such as "commercial," "industrial," "residential," or "open space."

Level of Service (LOS) – A letter grade designation used to describe given roadway conditions with "A" being at or close to free-flow conditions and "F" being at or close to over-saturation of the roadway; usually based on the progression of vehicles through the green phase of a signal, driver discomfort/frustration, lost travel time, and fuel consumption.

Light Rail Transit (LRT) – A rail technology that can operate in rights-of-way that are not grade-separated usually powered electrically by overhead catenary lines.

Locally Preferred Alternative (LPA) – The alternative selected by local decision-makers as the preferred solution to the corridor's identified needs. The full LPA is the 23.1-mile Metrorail extension in the Dulles Corridor.

Magnetic levitation – An emerging technology in which magnetic forces are used to lift or levitate a vehicle and then propel and guide it along a track with cruising speeds up to 300 miles per hour; also called maglev.

Mainline – The revenue service tracks on a rail line (the main service line), rather than auxiliary tracks (such as pocket tracks, crossovers, or maintenance tracks) or tracks providing a connection to a maintenance and storage facility.

Major Investment Study (MIS) – An alternatives analysis study process for proposed transportation investments in which a wide range of alternatives is examined to produce a smaller set of alternatives that

best meet project area transportation needs. The purpose of the study is to provide a framework for developing a package of potential solutions that can then be further analyzed during an Environmental Impact Statement (EIS) process.

Memorandum of Agreement (MOA) – A document that describes the terms and conditions agreed upon to resolve the potential adverse effects of a federal agency program, under Section 106 of the National Historic Preservation Act.

Metropolitan Washington Airports Authority (MWAA) – The Authority responsible for operating and maintaining Washington Dulles International and Ronald Reagan Washington National airports.

Metrorail Service and Inspection Yard (S&I Yard) – Yard that includes multiple buildings for light and heavy-duty maintenance of rail cars and for storage of out-of-service rail cars. Includes multiple tracks for moving and storing rail cars and parking for employees.

Mitigation banking - The restoration, creation, enhancement, and preservation of wetlands and/or other aquatic resources, for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.

Mixed-use – Combination of land uses, such as residential uses combined with office, retail, public, entertainment, or even manufacturing uses.

Monorail – A transit mode consisting of automated transit vehicles that operate on or are suspended from a single rail, beam, or tube.

Monumentation – A type of signage for a development or business.

National Environmental Policy Act of 1969 (NEPA) - requires federal agencies to consider the environmental impacts of major federal projects or decisions, to share information with the public; to identify and assess reasonable alternatives; and to coordinate efforts with other planning and environmental reviews taking place.

National Historic Landmark (NHL) – A designation denoting a historic properties on the National Register that are of particular significance.

National Register of Historic Places (NRHP) – The official list of the nation’s cultural resources worthy of preservation.

New Starts – A category of federal funding for major transit “fixed guideway” capital investments.

No Build Alternative - For the Dulles Corridor Rapid Transit Project, the No Build Alternative was consistent with the "no-action alternative" required by the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act of 1969, as amended, and provided a baseline for comparison against which the other alternatives were evaluated in the EIS. The No Build Alternative included existing highway and public transportation infrastructure in the Dulles Corridor, and transportation system improvements that were included in the Washington metropolitan region's constrained long-range transportation plan and committed to be implemented by 2025, aside from the Dulles Corridor Rapid Transit Project.

Noise Abatement Criteria (NAC) – Noise levels established by FHWA for various activities. When predicted noise levels approach or exceeds the NAC level, mitigation must be considered.

Non-revenue service hours – The time during which buses run between the storage facility and the beginning of the route and vice versa.

Off-peak travel hour – An hour of a 24-hour day when traffic is less than the maximum observed for the same 24-hour period.

Operating and maintenance (O&M) costs – Costs associated with operating and maintaining transit service, including vehicle operators, fuel, vehicle maintenance, and infrastructure (stations, tracks, right-of-way) maintenance.

Order of magnitude cost – A general cost figure used for comparative purposes.

Paratransit service – Demand-responsive service geared toward physically impaired passengers such as elderly and handicapped.

Park-and-ride facility – A parking facility that is part of a transit facility; an access mode for patrons to drive private vehicles to a transit facility.

Passive park – A park where the primary focus is low-impact, quiet recreation, including hiking, meditation, and nature study.

Peak particle velocity (PPV) – Expressed in units of ips, PPV represents the maximum instantaneous vibration velocity observed during an event. Typically used to evaluate the potential for damage to buildings.

“Peekaboo” sequence – Used to characterize the approach to Washington Dulles International Airport as designed by airport architect Eero Saarinen. Designed to provide a variety of views at different points of the approach to create a sense of dramatic expectation.

People-mover system – Typically automated rail systems that use passenger vehicles operating singly or in multi-car trains. The guideway for this mode must be grade-separated.

Personal Rapid Transit (PRT) – Typically envisioned as a fixed-guideway transit mode using small, low-capacity vehicles (one to four persons) designed to function like an automobile in an urban setting.

Platform hours – The daily total of the time a vehicle is in operation. This total includes a vehicle's revenue service hours and non-revenue service hours.

Platoon – In reference to BRT vehicles, two-vehicle “bus trains” in which the two vehicles run in tandem, though not physically connected like rail cars.

Pocket track – Track that is located between the main tracks and are used to store out-of-service trains and equipment.

Portal – Entrance into a Metrorail tunnel segment.

Preliminary Information Form (PIF) – A form that can precede the completion of a National Register Nomination Form to determine whether a property or district warrants more detailed documentation for nomination.

Proffer – A voluntary fee (or the provision of capital improvements in lieu of a fee) paid by a developer to a jurisdiction in return for a change in the zoning of an parcel of land.

Profile – The vertical alignment of a transit alignment, which typically shows the elevation of the alignment as it relates to ground level.

Project Team – The staffs of the Virginia Department of Rail and Public Transportation and of the Washington Metropolitan Area Transit Authority, which together made recommendations to the decision-makers, the Commonwealth Transportation Board and WMATA Board of Directors.

Public-private partnership – An innovative procurement process for private organizations to partner with public agencies to design, build, finance, and possibly own transportation infrastructure established under Virginia’s 1995 Public-Private Transportation Act.

Record of Decision (ROD) –The final step in the EIS process under NEPA. Documentation of the lead federal agency’s formal decision on the proposed action. This document constitutes the basis for the federal agency’s environmental finding on the project.

Regolith – The layer of loose rock resting on bedrock, constituting the surface of most land.

Resource Protection Area(s) (RPA) – Land(s) at or near the shoreline that have an intrinsic water quality value due to the ecological and biological processes they perform or are sensitive to impacts that may result in significant degradation to the quality of state waters.

Revenue service hours – The time during which buses pick up and transport passengers.

Right-of-way – Land available for operation of transportation facilities (roadways or transit lines). The land is typically government-owned (local, state, or federal). A transportation facility may occupy all or a portion of the right-of-way. Rights-of-way can be grade-separated or at-grade.

Root mean square (RMS) – The square root of the average of the squares of a set of numbers. To more accurately describe the human response to vibration, the root mean square (RMS) amplitude is used to assess impacts.

Schist – A medium- to coarse-grained, foliated metamorphic rock composed of laminated, often flaky parallel layers. Compositional layering may or may not be present.

Scoping – An early public discussion of the scope of issues related to a proposed federal action.

Secondary containment systems – Best Management Practices designed to enhance water quality. Examples include stormwater management ponds and oil/water separators.

Shovel test pit – A hole, typically round and one foot in diameter, excavated with a shovel through soil layers. Archaeologists use shovel test pits spaced at regular intervals to identify the presence of archaeological deposits or sites.

Single-Occupant Vehicle (SOV) – Privately operated vehicles whose only occupant is the driver.

Slip ramp – At-grade ramps that allow access to a barrier-restricted facility. For example, in the Dulles Corridor, there are several short, at-grade ramps that allow access between the Dulles Toll Road and the Dulles Airport Access Road.

Soft costs – In a project budget, allowances for engineering and management, project insurance, and agency costs.

Sound exposure level (SEL) – An indicator of the cumulative exposure to noise from a single sound event. SEL normalizes the time period of the Leq to one second allowing for the direct comparison of events or passbys with different time durations.

State Historic Preservation Officer (SHPO) – A person designated and appointed by the state governor to administer the State Historic Preservation Program, and the office of professional staff supporting the program.

Stormwater management pond(s) (SWMP) – A best BMP designed to enhance stormwater quality by slowing the velocity of runoff, thereby settling sediment and potential contaminants.

Tabular aquifer – An aquifer that is more or less continuous, but hydraulic connection across confining units and between individual aquifers is poor.

Tail track - Track (typically at end of line) used for storage of trains during operating hours. Sometimes used for reversing the direction of trains at the end of the line.

Tie-breaker stations – Facilities that break the rail power line into sections, allowing power in one or more sections to be shut down for maintenance without affecting the power supply to the rest of the system.

Topography – The surface features of a place or region.

Traction Power Substations – Facilities that convert alternating current power supplied by the power company into direct current power for the rail system.

Traffic Analysis Zone (TAZ) – The smallest geographically designated area for analysis of transportation activity.

Transit-Oriented Development (TOD) – A land use designation intended to encourage the use of transit. Measures employed in areas with TOD designations include increased densities, clustered development, pedestrian amenities, parking restrictions, and urban design enhancements.

Transit-related employment center (TREC) –The transit node designated near Route 606 by the Loudoun County Revised General Plan in which increased development is permitted based on the implementation of BRT or Metrorail. Because of its proximity to Dulles International Airport, the TREC does not permit residential development.

The Transportation Infrastructure Finance and Innovation Act of 1998 (TIFIA) - Established a new federal credit program under which the U.S. Department of Transportation may provide three forms of credit assistance – secured (direct) loans, loan guarantees, and standby lines of credit – for surface transportation projects of national or regional significance.

Transportation management agency (TMA) – Nonprofit, public-private partnership that works to improve transportation mobility in a region.

Transportation system management (TSM) – Low-cost, operationally oriented transit improvements. The TSM Alternative provides the baseline against which the cost-effectiveness of capital investments in the Build Alternatives can be evaluated.

Vehicle passby – an event whereby a vehicle passes a reference point.

Vehicle miles traveled (VMT) – on highways, the measurement of the total miles traveled by all vehicles in an area for a specified time period.

Vibration decibel (VdB) – The RMS velocity is expressed in inches per second (ips) or vibration decibels (VdB). Vibration levels in VdB are referenced to 1 micro inch per second (mips).

Virginia Department of Rail and Public Transportation (DRPT) – The agency that supports rail and public transportation systems in the Commonwealth of Virginia through funding programs, advocacy and technical support. DRPT is the owner and sponsor of the Dulles Corridor Rapid Transit Project.

Virginia Public-Private Transportation Act of 1995 (PPTA) – The legislative framework enabling the Commonwealth of Virginia, qualifying local governments and certain other political entities to enter into agreements authorizing private entities to acquire, construct, improve, maintain, and/or operate qualifying transportation facilities. The public entities may either solicit or accept unsolicited proposals from private sources.

Washington & Old Dominion (W&OD) Railroad Regional Park – A 45 mile-long, 100-foot wide recreational trail and parkland stretching from Arlington County to Loudoun County, Virginia.

Washington Metropolitan Area Transit Authority (WMATA) – The agency that plans, builds, operates, and maintains the Washington D.C. metropolitan region's Metrorail and Metrobus transit systems.

Wiehle Avenue Extension – Formerly known as LPA Phase 1, the Wiehle Avenue Extension connects to the existing Metrorail Orange Line between West Falls Church and East Falls Church Stations and would extend to Wiehle Avenue. It is anticipated that it will begin operations in 2011.

Welfare facility – Support facilities for operators of revenue vehicles. Typically includes one or more of the following: kitchen/lunchrooms, locker rooms, rest rooms, quiet rooms.

Yard lead - Track that connects the mainline to the service and inspection yard.